

ABSTRACT

A method of detecting motion in a monitored area receives video or image frames of the area. A high-speed motion detection algorithm is used to remove still frames in that do not portray motion. The remaining frames are subjected to a robust high performance motion detection algorithm to detect true motion from noise. A resource management controller provides sequencing of the two stages, initialization and adaptive updates. The frames comprise pixels that are optionally grouped in blocks of variable-sized pixels, each block being represented as a set of single value and variance. A model of the area is initialized, and comprises multiple weighted distributions for each block of pixels. The model is updated differently depending on new frames matching or not matching the model. The matching is measured using a new simplified divergence measure based on Jefferey's approach.